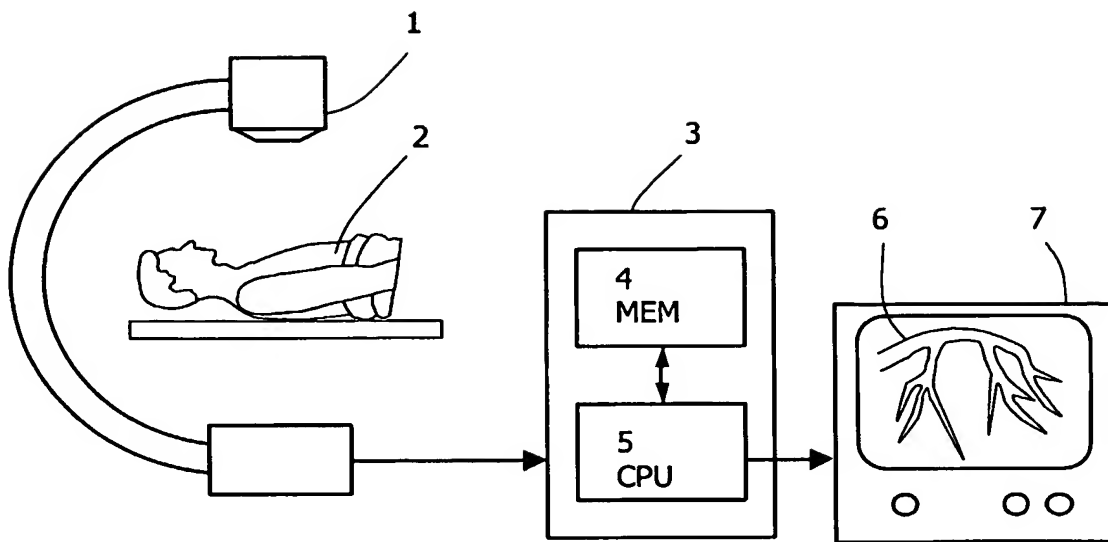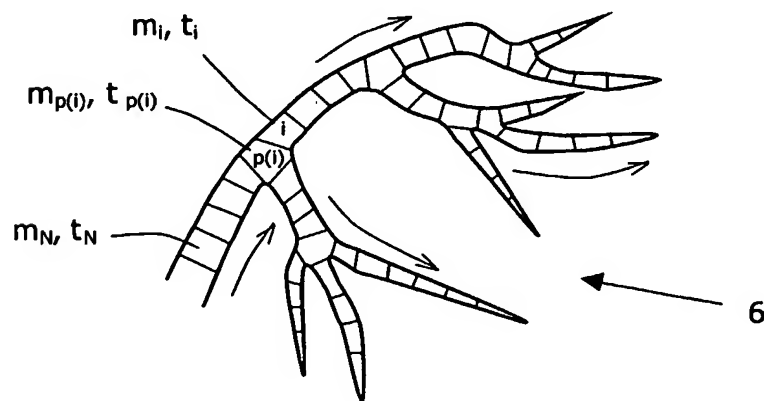**Fig. 1**

Fig. 2

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$$\vec{a} = \begin{pmatrix} \vec{t} \\ \vec{\epsilon}^+ \\ \vec{\epsilon}^- \\ \vec{\Delta} \\ \vec{\delta}^+ \\ \vec{\delta}^- \end{pmatrix} \quad (26)$$

$$\vec{c} = \begin{pmatrix} \vec{0}_N \\ \vec{1}_N \\ \vec{1}_N \\ \vec{0}_{N-1} \\ \lambda\vec{1}_I \\ \lambda\vec{1}_I \end{pmatrix} \quad (28)$$

$$\vec{b} = \begin{pmatrix} \vec{m} \\ \vec{0}_{N-1} \\ \vec{0}_I \end{pmatrix} \quad (27)$$

$$S = \begin{pmatrix} 1_{N\times N} & 1_{N\times N} & -1_{N\times N} & 0_{N\times N-1} & 0_{N\times I} & 0_{N\times I} \\ P & 0_{N-1\times N} & 0_{N-1\times N} & -1_{N-1\times N-1} & 0_{N\times I} & 0_{N\times I} \\ C & 0_{I\times N} & 0_{I\times N} & 0_{I\times N-1} & 1_{I\times I} & -1_{I\times I} \end{pmatrix} \quad (29)$$

$$C_{ij} = \begin{cases} 2 & \text{if } i = j \\ -1 & \text{if } p(i) = j \\ -1/|\{k|p(k)=i\}| & \text{if } p(j) = i \\ 0 & \text{else} \end{cases} \quad (30)$$

$$\vec{a} = \begin{pmatrix} \vec{t} \\ \vec{\epsilon}^+ \\ \vec{\epsilon}^- \\ \vec{\Delta} \\ \vec{\delta}^+ \\ \vec{\delta}^- \end{pmatrix} \quad (32)$$

$$\vec{c} = \begin{pmatrix} \vec{0}_N \\ \vec{0}_N \\ \vec{0}_N \\ \vec{0}_{N-1} \\ \vec{1}_I \\ \vec{1}_I \end{pmatrix} \quad (34)$$

$$\vec{b} = \begin{pmatrix} \vec{m} \\ \vec{0}_{N-1} \\ \vec{0}_I \\ sE^{(0)} \end{pmatrix} \quad (33)$$

$$S = \begin{pmatrix} 1_{N\times N} & 1_{N\times N} & -1_{N\times N} & 0_{N\times N-1} & 0_{N\times I} & 0_{N\times I} \\ P & 0_{N-1\times N} & 0_{N-1\times N} & -1_{N-1\times N-1} & 0_{N\times I} & 0_{N\times I} \\ C & 0_{I\times N} & 0_{I\times N} & 0_{I\times N-1} & 1_{I\times I} & -1_{N-M\times I} \\ 0_{1\times N} & 1_{1\times N} & -1_{1\times N} & 0_{1\times N-1} & 0_{1\times I} & 0_{1\times I} \end{pmatrix} \quad (35)$$

$$t_i^{(1)} = \begin{cases} t_i^{(0)} & \text{if } i < N \\ t_N^{(0)} - (s-1)E^{(0)} & \text{if } i = N \text{ and } t_N \le m_N \\ t_N^{(0)} - 2(t_N^{(0)} - m_N) - (s-1)E^{(0)} & \text{if } i = N \text{ and } t_N > m_N \end{cases} \quad (36)$$

Fig. 3